West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-03900003-2012**
Application Received: **June 27, 2011**
Plant Identification Number: **039-00003**
Permittee: **Union Carbide Corporation**
(A Subsidiary of The Dow Chemical Company)
Facility Name: **South Charleston Facility**
Mailing Address**: PO Box 8361**
South Charleston, WV 25303

Physical Location:	South Charleston, Kanawha County, West Virginia
UTM Coordinates:	439.67 km Easting • 4,246.72 km Northing • Zone 17
Directions:	I-64 West and take the Montrose Exit. Come down the road towards the river and proceed straight through the traffic light across MacCorkle Avenue directly into the South Charleston Facility.

Facility Description

Dow's Union Carbide facility produces a variety of specialty chemicals under SIC #2869. Their business units are grouped into the following classes:

Process	End Use
Polyvinyl Acetate	An intermediate that is used as chewing gum base
Specialty Surfactants	TRITON™ - Hard Surface Metal Cleaners, Emulsion Polymerization, Paints, and Coatings, Rinse Aids, Textile Processing, Degreasers, Industrial Laundry Applications, Car Wash Applications and Personal Care Applications
Oxide Adducts	The Oxide Adducts unit produces various Polyether Polyols used in surfactants, brake fluids, hydraulic and metal working fluids.

Chemical Mixing	Miscellaneous organic chemicals (e.g. mixing and blending of organic chemical raw materials with other substances)
Energy Systems & Pipeline/Environmental Operations	Site Utilities – e.g. steam, water, plant air/nitrogen, etc. Operations include water treatment plant, waste water flume/sump system, and ethylene oxide distribution system.
Remediation Operations	Soil and groundwater corrective action
Infrastructure Operations	Maintenance Operations and Bulk Shipping/Receiving of raw materials and products

Emissions Summary

Plantwide Emissions Summary [Tons per Year]

Criteria Pollutants	Potential Emissions	(2010) Actual Emissions
Carbon Monoxide (CO)	224	48
Nitrogen Oxides (NO_X)	1,510	280
Particulate Matter ($PM_{2.5}$)	108	19
Particulate Matter (PM_{10})	108	20
Total Particulate Matter (TSP)	108	25
Sulfur Dioxide (SO_2)	2,152	330
Volatile Organic Compounds (VOC)	240	78

PM_{10} is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	(2010) Actual Emissions
Benzyl Chloride	3.4	2.5
Chlorine	21*	0.01
Formaldehyde	0.5	0.1
Hexane	8	1
Hydrogen Fluoride	9*	2
Hydrogen Chloride	369*	13
Glycol Ethers	8	2
Propylene Oxide	7	2
Vinyl Acetate	16	2
All other HAPs (<1tpy individual emissions)	15	3

Some of the above HAPs may be counted as PM or VOCs.

**PTE of chlorine, hydrogen fluoride, and hydrogen chloride are expected to be less than 1 tpy upon final decommissioning of coal fired boiler B25.*

Title V Program Applicability Basis

Due to this facility's potential to emit over 100 tons per year of VOCs, over 100 tons per year of NOx, over 100 tons/yr of CO and PM_{10}, over 100 tons per year of SO_2, over 10 tons per year of a single HAP, and over 25 tons per year of aggregate HAPs, the permittee is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:

45CSR2	To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers.
45CSR6	Open burning prohibited.
45CSR7	To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations.
45CSR10	To Prevent and Control Particulate Air Pollution from the Emission of Sulfur Oxides.
45CSR11	Standby plans for emergency episodes.
45CSR13	Permits from Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation.
45CSR16	Incorporation of NSPS pursuant to 40CFR60
WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
45CSR30	Operating permit requirement.
45CSR34	Incorporation of MACT pursuant to 40CFR63
45CSR40	Control of Ozone Season Nitrogen Oxide Emissions
40 C.F.R. Part 60	Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction or Modification Commenced After July 23, 1984.
40 C.F.R. Part 60	Subpart Db – Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

	40 C.F.R. Part 61	Subpart M – National Emission Standard for Asbestos.
	40 C.F.R. Part 61	Subpart FF – National Emission Standard for Benzene Waste Operations.
	40 C.F.R. Part 63	Subpart PPP – Polyether Polyols Production National Emission Standards for Hazardous Air Pollutants.
	40 C.R.F. Part 63	Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants of Industrial, Commercial, and Institutional Boilers and Process Heaters.
	40 C.F.R. Part 63	Subpart FFFF- National Emission Standard for Misc. Organic Chemical Production and Processes (MON)
	40 C.F.R. Part 63	Subpart ZZZZ - National Emission Standard for Reciprocating Internal Combustion Engines (RICE)
	40 C.F.R. Part 64	Compliance Assurance Monitoring (CAM)
	40 C.F.R. Part 68	Chemical Accident Prevention Provisions.
	40 C.F.R. Part 82	Subpart F Protection Prevention Provisions; Recycling and Emissions Reduction.
State Only:	45CSR4	No objectionable odors.
	45CSR21	§45-21-40. Other Facilities that Emit Volatile Organic Compound (VOC) §45-21-37. Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment.
	45CSR27	To Prevent and Control the Emissions of Toxic Air Pollutants

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR15, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	**Date of Issuance**	**Permit Description, Determinations or Amendments That Affect the Permit *(if any)***
R13-2033C	09-20-2011	Steam Generating Boiler No. 26 (352 MM Btu/hr NG Fired), "C" permit authorizes combustion control of process vent gases from equipment covered by MACT standards and vaporized natural gas liquid condensate.
R13-2141C	04-19-2004	Steam Generating Boiler No. 27 (353 MM Btu/hr NG Fired) This boiler also burns process vent gas from Bayer's PO Carbon Regeneration in addition to the a number of UCC's gas vents from the gum base unit.
R13-2414C	08-08-2011	4 Auxiliary Air Compressors for backup plant air supply

R13-1517B	06-30-2005	TRITON Surfactants Unit, Process Area No. 1000. Superseded Reg. 21and 27 consent order limitations applicable to this process area
R13-2568	04-19-2004	Coal Fired Boiler. Boiler No. 25 (323 MM Btu/hr)
R13-2840	08-12-2010	Installation of a groundwater/soil remediation process unit
CO-R27-97-17-A(94-21)	04-25-1997	Toxic Air Pollutant Consent Agreement to operate using "BAT" control techniques for Ethylene Oxide and Propylene Oxide. Formaldehyde, Benzene, and Ethylene Dichloride are limited to below applicability thresholds.
CO-R21-98-22	06-06-1998	Original Consent Order Agreement was signed by UCC on June 6, 1998 with established "RACM" control requirements for existing sources > 6 lb/hr VOC and establishes the need to conduct RACT analysis for future sources meeting these requirements. This Consent Order was amended by UCC letter dated October 10, 2006 from J. L. Blatt, UCC Responsible Care Leader to John A Benedict, Director of WVDAQ, to reflect process changes since 1998.

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B" which may be downloaded from DAQ's website.

Determinations and Justifications

45CSR2 *To Prevent and Control Particulate Air Pollution From the Combustion of Fuel in Indirect Heat Exchangers*

45-2-3 **Visible Emissions of Smoke and/or Particulate Matter Prohibited and Standards of Measurement**.

Section 3.1 of this rule establishes an opacity standard of 10% which is applicable to the facility's two natural gas steam boilers and one coal fired boiler that now burns only gaseous process vents for control and natural gas as the primary fuel (Emission Point ID 26, 27, and 25 respectively). The permittee is required to conduct opacity checks monthly on each of these emission points

Per the current NSR permit, the B25 coal fired boiler utilized a continuous opacity monitor to demonstrate compliance with this limitation. As a result of the planned decommissioning of this boiler the permittee permanently discontinued burning coal in Boiler 25 in August of 2011. The burning of liquid residues were discontinued some time before August 2011. For compliance demonstration purposes monitoring of stack opacity has been changed to monthly Method 22 VE checks since, the boiler has voluntarily switched to all gaseous fuel combustion. This change is warranted because the gaseous fuels contain no ash forming constituents.

45-2-4 **Weight Emission Standards.**

Boilers Number 25, 26, and 27

The allowable particulate matter (PM) emission rate for Boilers 25, 26 and 27, which are identified as Type "b" fuel burning units, per 45CSR2, is the product of 0.09 and the total design heat input of the boiler in million Btu per hour. The limits for each of these 323, 352 and 353 MM Btu/hr rated natural gas boilers is 29.07, 31.68, and 31.77 lb/hr, respectively. Based on emission factors taken from AP-42 for natural gas combustion the maximum potential uncontrolled PM emissions from Boiler 25, 26 and 27 are estimated to be 2.42, 2.65 and 2.65 lbs/hr, respectively.

To assure compliance for Boilers 25, 26 and 27, the permittee is to maintain records of:

1. The date and time of start-up and shutdown and

2. The quantity of fuel consumed on a monthly basis, for each fuel burning unit.

45-2-8 **Testing, Monitoring, Recordkeeping and Reporting.**

Boiler B26 minor NSR permit R13-2033 was recently modified to allow combustion of process vent gas consistent with that permitted for Boilers B27 and B25. Therefore Boiler B26 seems to no longer qualify for the 45CSR§2-8.4.b. "natural gas only" exemption. However, as a result of burning process vent gases which contain mostly propylene oxide and vinyl acetate in order to satisfy 40 C.F.R. 63 MACT control requirements for volatile HAP, the writer has determined the "natural gas only" exemption of 45CSR§2-8.4.b shall be maintained due to the fact that these process vent gases are not considered to be an alternative fuel source. Even though the vent header gas would have adequate heat content, their relative volumes are not great enough to be considered an alternative fuel source. Even if the vent gas should become a significant contributor to the overall energy input to the boiler the contents of the process gas would be essentially equivalent to natural gas from a standpoint of maintaining complete combustion and a low ash content.

Therefore, due to implementing the natural gas only exemption within 45CSR2, the unit is not required to conduct periodic PM testing although, the Director reserves the right to request testing under §2-8.1.b of 45CSR2. This boiler is still subject to the recordkeeping and reporting provisions of 45CSR§2-8.3.c. Records shall be maintained to document operating schedules and the quantity and quality of fuel consumed in a manner to be established by the Director. 45CSR2A specifies that the frequency for natural gas recordkeeping shall be monthly under 45CSR§2A- 7.1.a.1. All boilers remain subject to the testing provisions of 45CSR§2-8.1.b., which states that the Director reserves the right to require testing.

Boiler 27 burns natural gas in addition to the same process vent gas discussed for boiler B26. These vents originate from Bayer's carbon regeneration operations as well as from the permittee's Gum Base (PVA) Unit. Therefore the same determination to maintain the "natural gas only" fuel exemption also applies to this unit. Therefore, due to implementing this exemption as defined in 45CSR§2-8.4.b, the fuel burning unit is not required to conduct periodic PM testing. Although, the Director maintains the right to request testing under 45CSR§2-8.1.b. This boiler is also subject to the recordkeeping and reporting provisions of 45CSR§2-8.3.c. Records shall be maintained to document operating schedules and the quantity and quality of fuel consumed in a manner to be established by the Director. 45CSR2A specifies that the frequency for natural gas recordkeeping shall be monthly under section 7.1.a.1.

After the effective date of this permit Boiler 25 will be authorized to burn only natural gas, process vent gas and natural gas liquid condensate (which is vaporized prior to combustion) collected from supply piping during the winter months. The determination of natural gas only and its exemption also apply to this unit. It was noted that the natural gas liquid condensate fits into the definition of natural gas within 45CSR2 as it also specifies inclusion of liquefied petroleum.

Boiler 25 is currently in the process of being decommissioned and as a result is now permitted to only burn natural gas as well as the same process vent gas discussed above for the other two boilers. As a result under 45CSR2 the boiler is no longer required to install, operate and maintain records of COM measurements. This change to natural gas only as fuel also removed the need for the unit to operate its existing ESP control device. This unit is expected to be permanently shut down by December 31, 2012. Permanent shutdown is required within 6 months of commencement of burning process vent gases/natural gas condensate in Boiler 26 as permitted by R13-2033C.

45-2-9 **Start-ups, Shutdowns and Malfunctions.**

The visible emission standards of 45CSR§2-3 shall apply at all times except during periods of start-up, shutdown, or malfunctions. Section 45CSR§2-9.2 specifies that during these times the permittee shall maintain and operate any fuel burning unit(s) including associated air pollution control equipment in a

manner consistent with good air pollution control practice for minimizing emissions. 45CSR§2-9.3 requires the permittee to report to the Director any malfunction of such unit or its air pollution control equipment which results in any excess PM emission rates or excess opacity as specified.

45CSR4 ***"To Prevent and Control the Discharge of Air Pollutants Into the Open Air Which Causes or Contributes to an Objectionable Odor or Odors".*** The permittee's potential to release VOCs supports the fact that this rule is applicable to the facility evaluated herein.

45-4-3 **Objectionable Odor Prohibited**.
Subdivision 3.1 of Rule 4 states that no person shall allow the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.

45CSR7 ***"To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations"*** This Rule applies to all activities, which have the potential to create PM or mineral acid emissions during the permitted manufacturing process.

45-7-3. **Emission of Smoke and /or Particulate Matter Prohibited and Standards of Measurement**.

Compliance with the 20% opacity standard of 45CSR§7-3.1 shall be demonstrated by conducting visible emission checks at least once per calendar month (unless otherwise specified in the permit) with a maximum of forty-five days between consecutive readings. These checks shall be performed at each manufacturing process source operation for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) the permittee shall conduct an opacity reading at that source using the procedures and requirements of 45CSR§7A as soon as practicable, but within seventy-two (72) hours from verifying visible emissions were present.

45-7-4 **Control and Prohibition of Particulate Emissions by Weight from Manufacturing Process Source Operations.**
The following emission sources are subject to hourly particulate limitations based upon process weight rates as defined by 45CSR7 Table 45-7A: Emission Point IDs (E-1087-1, E-229, E-228). Emission point E-1087-1 can be found in section 5.0 Triton™ Specialty Surfactants. Additionally, emission points E-229 and E-228 can be found in section 10.0 Gum Base PVA of the Title V permit.

45-7-5.1 **Control of Fugitive Particulate Matter.**
Two tanks, T-8706 and T-8709, within section 5.0 are subject to the fugitive PM requirements as follows:

No person shall cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.

These two tanks contain liquids, but are periodically charged by hand through a loading hopper with small bags of solid reactants.

45-7-9.1. This section addresses unavoidable malfunction of equipment for which the permittee must provide specific application to the Director within 24 hours of the malfunction.

45CSR10 ***"To Prevent and Control Air Pollution from the Emissions of Sulfur Oxides"***

The facility evaluated herein was found to have a 352 MM Btu/hr natural gas boiler, a 353 Btu/hr natural gas fired unit and one 323 MM Btu/hr coal fired steam boilers located in Priority Region III subject to Rule 10. The natural gas boilers are exempt from the testing, monitoring, recordkeeping and reporting provisions of section 8 per 45CSR§10-10.3 as a result of burning only natural gas as fuel. After the effective date of this permit burning coal in Boiler B25 will not be authorized.

45-10-3 **Sulfur Dioxide Weight Emission Standards for Fuel Burning Units**.

Section 3.3(f) of this rule defines a sulfur dioxide limit for three boilers as the product of 3.2 and the total design heat inputs. The combined heat input for these three boiler is 1029 MMBtu/hr, which results in an overall facility limit of 3292.8 lb SO2/ hr. The individual stack allowable emissions are to be prorated by design heat input in accordance with section 3.4. Therefore, the sulfur dioxide emission limit for each of the 2 (approximately 353 MMBtu/hr) boilers is defined as 1129.6 lbs SO2/hr. Compliance with Rule 10 SO2 limits are streamlined by demonstrating compliance with NSR permit limits established within R13-2141C and R13-2033C to be no more than 0.26 lb/hr and 20.1 lb/hr respectively. Where as the 323 MMBtu/hr coal fired boiler, emission point 25E has an individual stack specific emission limit of 1033.6 lb SO2/hr defined by Rule 10. Compliance is again streamlined by the NSR permit limit of 491 lb/hr from R13-2568.

However, due to the 2012 decommissioning of Boiler 25 it is no longer burning coal. In accordance with the conditions of R13-2033C the B25 boiler can only burn natural gas plus natural gas liquid condensate as well as process gas and will be completely shut down within 180 days of burning the newly permitted process gas streams in Boiler 26.

45-10-8 **Testing, Monitoring, Recordkeeping and Reporting.**

As summarized above the natural gas boilers (B25, B26 and B27) are exempt from this section per 45CSR§10-10.3 of the rule.

The B25 boiler, is required to conduct fuel sulfur sampling once per day when burning coal, however, this requirement is not applicable when burning natural gas. Additionally, the process vent gas stream and natural gas liquid condensate that also continue to be burned in the boiler during its decommissioning phase have been evaluated in the past and found not to have the potential for sulfur bearing compounds.

45CSR13 ***"Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation"***

The permittee has a number of minor source construction permits, which are summarized below.

R13-2033C was issued 09/20/2011 and covers the operations of boiler #26. The permit defines emission limits for CO, NOx, PM, SO2, VOCs, Vinyl Acetate, Propylene Oxide, Hexane, Total HAPs, and CO_{2e} on an hourly and annual basis. The boiler is limited to burn no more than 352,000 standard cubic feet of natural gas per hour nor more than 3,086 MM scf/yr. Additionally, boiler 26 is limited to no more than 100 gallons per hour of natural gas liquid condensate nor more than 24,700 gal/yr. Each of these limitations shall be based on a 12 month rolling total. The permit also specifies applicability to 40 CFR 60, Subpart Db. This NSPS limits NOx emissions to no more than 0.2 lbs NOx/ MM Btu after commencement of burning the recently permitted process vent gas streams. As provided by NSPS requirement 40 CFR§60.48b(2), installation of a nitrogen oxides continuous emission system meeting the requirements of 40 CFR 75, Subpart H, meets the requirements of Subpart Db, except as otherwise provided by 40

CFR§60.48b(2). The permittee is required to monitor and record fuel consumption rates and operating schedules in accordance with 45CSR2. This permit also authorizes combustion of process vent gas from Bayer MaterialScience's propylene oxide filtering system 40 C.F.R. 63, subpart PPP MACT vent(s), as well as, the combustion of process vent gas originating from the Gum Base, polyvinyl acetate, unit in accordance with 40 C.F.R. 63, subpart FFFF control requirements. Each of these MACTs require control of at least 98% of the target HAP(s). Because the boiler is greater than 150 MM Btu/hr design heat input, they are exempt from MACT performance testing, design evaluation, and monitoring requirements.

R13-2141C was issued 04/19/2004 and includes standard requirements applicable to steam generating boiler No. 27. The permit defines emission limits for CO, NOx, PM10, SO2, VOC, Propylene Oxide, Hexane, MEK and Vinyl Acetate based on an hourly and annual basis. This boiler is also a 353 MM Btu/hr natural gas fired boiler which has the permitted capabilities to burn process vent gas from two (2) different process units the Gum Base Plant and Bayer MaterialScience. The Gum Base Plant (polyvinyl acetate) unit's process vent streams were all determined (within an earlier amendment) to have negligible heating values. Whereas, the process vent gas stream from Bayer MaterialScience's propylene oxide filtering unit has a permitted venting capacity of 2000 pounds per hour of propylene oxide to the No. 27 boiler. The boiler capacity is limited to 353 MM Btu/hr, which becomes practically enforceable through a natural gas throughput limitation of 353,000 cubic feet of natural gas per hour, or approximately 3,092 million cubic feet natural gas per year. The permit also specifies applicability to 40 CFR 60, Subpart Db. As provided by 40 CFR§60.48b(2), installation of a nitrogen oxides continuous emission system meeting the requirements of 40 CFR 75, Subpart H, meets the requirements of Subpart Db, except as otherwise provided by 40 CFR§60.48b(2). The permittee is required to monitor and record fuel consumption rates and operating schedules in accordance with 45CSR2. In addition, the permit establishes applicability to state Rule 45CSR27 for air toxics and 45CSR34 "MACT NESHAPs" due to its use as a Subpart PPP control device as part of an agreement to provide destruction of process vent gas from Bayer MaterialScience's Polyether Polyols' propylene oxide filtering system. The combustion of Gum Base process vent gas is covered by 45CSR34 (40 C.F.R. 63, Subpart FFFF). Due to the boiler having a design heat input capacity above 150 MM Btu/hr, they are exempt from MACT performance testing, design evaluation, and monitoring requirements.

R13-2568 was issued 04/19/2004 and includes standard requirements applicable to the coal fired steam generating boiler No. 25. The permit defines emission limits for CO, NOx, PM, Lead, SO2, VOC, Propylene Oxide, Hexane, MEK, Vinyl Acetate, Hydrofluoric Acid, Hydrochloric Acid, Chlorine, and other trace HAPs. These emission limits are established on an hourly and annual basis. The emission units encompassed by this permit consist of a 323 MM Btu/hr boiler which burns coal, natural gas, natural gas liquid condensate, waste residues, and process vent gas. Burning of liquid chemical residues for recovery of heat content has been permanently discontinued. The process vent gas comes from the same two (2) process units as detailed within the discussion provided for R13-2141C above. Coal and natural gas consumed by the boiler are limited based on burning the maximum rated capacity of all coal or all natural gas. A weight percent sulfur in coal is set at 1%. PM and lead emissions are to be controlled by an electrostatic precipitator. Opacity is limited by 45CSR2 to 10%. The permittee is required to monitor and record fuel quality and consumption rates as well as operating schedules on a daily basis. In addition, the permit establishes applicability to state Rule 45CSR27 for air toxics and 45CSR34 "MACT NESHAPs" due to its use as a Subpart PPP control device resulting from an agreement to provide destruction of process vent gas from Bayer MaterialScience's Polyether Polyols' propylene oxide filtering system. This permit also authorizes combustion of Gum Base process vent gas as covered by 45CSR34 (40 C.F.R. 63, Subpart FFFF). Due to the boiler having a design heat input capacity above 150 MM Btu/hr, they are exempt from MACT performance testing, design evaluation, and monitoring requirements.

After the effective date of this permit, Boiler 25 will be authorized to burn only natural gas, process vent gas and natural gas liquid condensate (which is vaporized prior to combustion) collected from supply

piping during the winter months. As a result, the requirements to operate/maintain a continuous opacity monitoring system and electrostatic precipitator to reduce PM emissions are not necessary.

R13-2414C was issued 08/08/2011 and establishes applicable requirements for four (4) auxiliary air compressors in order to maintain adequate pressure and delivery volume to the plant air header in the event the normal electric driven compressors fail, require maintenance or lose power. This modified permit recognizes that these compressors are rental units and may change from time to time. Therefore the installation date was removed from the equipment table. This permit establishes emission limits for NOx, CO, PM10, and hydrocarbons for each compressor based on AP-42 for the pound per hour limits and manufacturer guarantees for the annual emission rates. The permittee has to maintain accurate records of the hours of operation for each portable auxiliary air compressor or the amount of gas combusted in order to use an emission factor approach to demonstrating compliance with the emission limitations.

Because these compressors are portable, the NESHAP for Stationary Internal Reciprocating Internal Combustion Engines (40 C.F.R. 63, Subpart ZZZZ) does not apply. In the event that fossil fueled auxiliary air compressors remain on site for 12 consecutive months, the units would be considered stationary and Subpart ZZZZ provisions would be applicable. For additional details pertaining to what constitutes a "stationary RICE" see the Subpart ZZZZ applicability section below.

R13-1517B was issued 06/30/2005 and encompasses operations within the Specialty Surfactants (Triton™) Unit, which are covered, by MACT subpart PPP, "Polyether Polyols". The permit establishes capped emission limitations for all process tanks, process reactors, the glycol system and one PM emission point. The emissions from the Triton™ unit are controlled by a caustic scrubber and/or a water scrubber, which are incorporated in series when ethylene oxide and propylene oxide are utilized as raw material feedstock. When reactor 8400 produces polyether polyols from epoxides it is required to obtain a control efficiency of 98% according to the 40CFR63, Subpart PPP MACT. This is accomplished by implementing extended cookout as the method of control. Operating parameters for minimum liquid level, liquor flow rate, liquid temperature, pressure drop, and percent NaOH are established and required to be monitored and recorded per the Regulation 13 permit. For Subpart PPP compliance the extended cookout time is required to be tracked and recorded. The permittee is also required to submit semiannual reports quantifying the amount of ethylene and propylene oxide emitted as well as any periods in which compliance with the permit's monitoring provisions were not achieved. The owner and operators are required to comply with the LDAR requirements of 40CFR63 Subpart H.

R13-2840 was issued 08/12/2010 and encompasses the groundwater/soil remediation unit operations. This permit requires the use of a thermal oxidizer (TO) and caustic scrubber which is used to control VOC and HCL emissions. The system is required to meet emission limits for the following pollutants: NO_x, CO, SO_2, PM, VOC, 1,1,2-Trichloroethane, Vinylidene Chloride, Ethylene Dichloride, Trichloroethene, HCL, Other Organic HAPs, and Total HAPs. The regenerative TO incorporated by this permit is required to maintain at least 98% control of VOCs or to a level of no more than 3.1 lbs/hr VOCs. The thermal oxidizer shall operate with a fire box temperature of at least 1400° F. The caustic scrubber is required to reduce HCl emissions by at least 99.5 % or to no more than 0.35 lb/hr HCl. The scrubber's operating parameters are limited to a daily average pH of inlet liquid of at least 7.0 when contaminated vent gas is being combusted. Visible emissions from the TO are also limited to 20 % opacity in accordance with 45CSR6. The permit goes on to define daily monitoring of these parameters as well as a monthly visible emissions, Method 22 check, initial VOC stack testing, as well as subsequent VOC stack testing at least once per 6 month period.

45CSR16 "*STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES PURSUANT TO 40 CFR PART 60*

Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

40CFR60, subpart Db applies to natural gas fired boilers (ID B26 and B27). This Federal Regulation establishes a NOx emission limit of 0.20 lbs NOx/MMBtu in accordance with §60.44b(1)(ii). Accordingly, this equates to about 70.6 lb/hr and 309 TPY NOx per boiler. Boiler 26 must meet a NOx limit of 0.07

lbs/MMBtu until commencement of burning process vent gases as authorized by permit R13-2033C. Compliance with these limits is demonstrated by incorporation of a 30-day rolling average measured by NOx CEM in accordance with §60.46b(e)(3). §60.48b(b)(2) requires a NOx CEMS to be incorporated that meets the requirements of 40CFR60, Subpart Db. As provided by §60.48b(2), installation of a nitrogen oxides continuous emission system meeting the requirements of 40 C.F.R. 75, Subpart H, meets the requirements of Subpart Db, except as otherwise provided by §60.48b(2). In addition to Part 75 these two boilers shall also meet the Reporting and Recordkeeping requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in Subpart D of Part 75, nor shall the data have been bias adjusted according to the procedures of Part 75. Also in accordance with §60.48b subdivision (j) specifies that natural gas units can maintain fuel supplier certifications in order to demonstrate compliance with the Sulfur limitation of less than 0.32 lb/MMBtu. Under the Reporting and Recordkeeping section §60.49b(d) the affected sources shall record and maintain records of the amounts of each fuel burned during each day and calculate the annual capacity factor.

NSPS Tank Requirements

The following tanks T-9510, T-9511, T-9512, and T-9513 are subject only to the NSPS monitoring requirements of 40CFR§60.116b(b). All other tanks in VOL service meet the criteria specified within the non-applicability section on page 12 of this Factsheet.

45CSR21 "*REGULATION TO PREVENT AND CONTROL AIR POLLUTION FROM THE EMISSION OF VOLATILE ORGANIC COMPOUNDS"*

The permittee is complying with section 30 for a number of solvent metal cleaning degreasers utilized by the facility's maintenance shop. Because of the low vapor pressure and operating conditions of the baths, the baths are subject to Section Regulation 21, Section 30.3.a.4 through 30.3.a.9. Accordingly they maintain covers and records of solvent used. Records are also maintained to determine vapor pressure of the solvent being used.

Additionally, the source is subject to section 40 and has entered into consent order #CO-R21-98-22 which establishes an alternative emission reduction plan (AERP) to limit VOCs on all point sources greater than 6 lb/hr as well as a leak detection and repair (LDAR) program in accordance with section 37.

The consent order and all its requirements are incorporated by the proposed Title V permit within section 9.0.

45CSR27 "*To Prevent and Control the Emissions of Toxic Air Pollutants"*

The permitee is subject to Rule 27 as a result of emitting the following toxic air pollutants: Ethylene Oxide, Propylene Oxide, Benzene, and Formaldehyde. The Rule 27 chemicals which trip the "BAT" applicability thresholds are Propylene Oxide 157,783 lb/yr > 5,000 lb/yr and Ethylene Oxide 17,867 lb/yr > 500 lb/yr.

The Title V permit incorporates the 45CSR27 Consent Order # CO-R27-97-17-A(94-21). This order establishes emission limits for Benzene emissions from the Vinyl Methyl Ether (VME) Unit as well as Tank 9003 within the North Charleston Distribution Terminal. Since this time, the VME unit and T9003 have been demolished. A small amount of benzene emissions could result from other process operations as a result of being a raw material impurity. The Facility benzene PTE is less than the 45CSR27 threshold.

Formaldehyde is emitted from the Chemical Mixing unit as well as the Specialty Surfactants (Triton^{TM}) unit, however, the combined amount is less than the 1000 lb/yr applicability threshold, therefore, no "BAT" reductions are required. Formaldehyde emissions were estimated for the original consent order as follows:

Formaldehyde Emission

Source ID	Source Description	Emission Point ID	Pre-Control Emissions	Predicted Emissions
Chemical Mixing			(lb/yr)	(lb/yr)
Point Source			<50	<50
Fugitives		NA	<50	<50
Subtotal			<100	<100
TRITON				
Point Source			1	1
Fugitive			<10	<10
Subtotal			<11	<11
Total			**<111**	**<111**
Formaldehyde R27 "BAT" Threshold = **1000** lb/yr				

The Oxide Adducts and Specialty Surfactants (Triton™) units both control propylene oxide and ethylene oxide emissions by incorporating extended cookout operating practices as required by 40CFR63, Subpart PPP "Polyether Polyols" MACT standard, however the Specialty Surfactants (Triton™) unit was never incorporated by the 45CSR27 Consent Order. All equipment in "TAP" service is subject to the LDAR requirements of 40CFR63, Subpart H.

45CSR34 ***Emission Standards for Hazardous Air Pollutants***

Industrial Boiler MACT, Subpart DDDDD

The capacity of Boilers 25, 26 and 27 are all greater than 10 MM Btu/hr and are defined as large boilers based on the Industrial Boiler MACT. As a result of boiler B25 no longer burning RCRA hazardous waste the unit will be subject to the boiler MACT, however, this unit is expected to be permanently shut down by the end of 2012. The other two units B26 and B27 are large existing natural gas fired units.

On February 21, 2011, EPA signed the final rule for the Boiler MACT. This rule was published in the Federal Register on March 21, 2011 which established the existing source compliance date as March 21, 2014.

On May 18, 2011 EPA published a Federal Register final rule (76 FR 28662-28664) staying 40 CFR 63, Subpart DDDDD in its entirety along with an indefinite delay of its effective date. However, on January 9, 2012 the US District Court for the District of Columbia declared unlawful EPA's May 18, 2011 stay and delay of the major source Boiler MACT (40 CFR 63, Subpart DDDDD) and new portions of CISWI (40 CFR 60, Subparts CCCC and DDDD). However, EPA has plans to finalize its reconsidered versions of these rules by Spring 2012, and replace these newly reinstated rules, including re-setting of reporting and compliance timelines. In a January 18, 2012 letter to Senator Wyden of Oregon, EPA Administrator Jackson stated that using its enforcement discretion, EPA does not intend for the recent court decision to impact new or existing sources in the interim before the new rules are promulgated.

Polymer Polyols MACT, Subpart PPP

The permittee has multiple units subject to this regulation, reactor (8400) within the Triton™ specialty surfactants unit, as well as the Oxide Adducts reactors. Each of the reactors incorporate extended cookout to meet the control requirements.

Misc. Organic NESHAP (MON), Subpart FFFF

Within the facility's Notification of Compliance Status Report seven Group 1 emission units were identified as subject to the MON regulation. These requirements were also incorporated within significant permit modification SM02 pertaining to the 2006 Title V permit. The units with control requirement were

recognized within the Gum Base Unit as T-3080, T-9011, C-501, C-650R, Y-520, and Y-525. Additionally, within the Triton™ Unit a Group 1 wastewater stream was defined as GR-7M Decant.

RICE Engine MACT, Subpart ZZZZ

The permittee has a total of three existing emergency compression ignition CI engines that are subject to the requirements of this subpart. These engines are used to drive fire water pumps. For the two engines 500hp or less, these requirements are limited to work practice standards pertaining to engine maintenance schedules. The third engine is greater than 500hp and is exempt from the work practice standards, but still has to operate the engine in accordance with the limitations that classify it as an emergency unit.

It was noted that the emergency air compressors permitted by R13-2414C are rental units which initially fit the definition of "non-road" engines and as long as it is moved from one unit to another within the same site and it doesn't remain at any one site for more than 12 months then it would not qualify for regulation under Subpart ZZZZ as a stationary RICE.

Additional insight into this classification scheme was found within a separate ADI determination (Control Number M090038) and traces back to the definition of non-road engine as defined under 40 C.F.R. §1068.30. Specifically the definition states: "a non-road engine is any internal combustion engine: (iii) that, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location or another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform."

In addition, 40 C.F.R. §1068.30 states that which is not a non-road engine: an internal combustion engine is not a non-road engine if: (iii) the engine otherwise included in paragraph (1)(iii) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. A location is any single site at a building, structure, facility, or installation. Any engine that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three months (or more) each year."

45CSR40 ***CAIR NOX Ozone Season Trading Program*** requirements have been removed for Boiler B25, Boiler B26 and Boiler B27, as the trading program ends for these units on January 1, 2012. These units will continue reporting of NOX mass emissions under 40 CFR Part 75. Refer to permit condition 3.1.9. Also, the appendix containing the CAIR Permit Application was removed from the permit.

Greenhouse Gas Permitting - This is a renewal Title V permit and there have been no modifications that would have triggered a PSD permit. Therefore, there are no applicable GHG requirements.

40 C.F.R. 64 Control Device Compliance Assurance Monitoring (CAM)

The facility evaluated herein was found to have one pollutant specific emission unit, the groundwater/soil remediation unit, subject to CAM. The unit's precontrolled emissions are estimated to be major for volatile organic compounds (VOCs) and a hazardous air pollutant (HAP) hydrochloric acid (HCL). The source operates a regenerative thermal oxidizer and caustic scrubber in order to abate emissions from the unit. This equipment was permitted by minor NSR permit number R13-2840, but these requirements had not yet been incorporated into the Title V permit upon submittal of the renewal application.

The permittee has proposed to conduct stack testing to demonstrate control equipment operating ranges which demonstrate compliance with permitted emission limits. These operating ranges are currently

established consistently with what is authorized under R13-2840. The thermal oxidizer plans to keep its combustion chamber temperature above 1400 F in order to completely destruct all VOC(s). After the oxidizer a caustic packed bed scrubber is used to remove any hydrogen chloride (HCl) or chlorine (Cl) which may have been formed during the combustion of chlorinated organic VOCs. The scrubber is currently permitted to keep a daily average pH value of 7 or above. The scrubber liquor flow is to be maintained at or above 30 gpm. Since the units emissions are below major source thresholds after controls the source is only required to measure the indicators at least once per day.

Additional control devices were evaluated having the following IDs (C709, C710, C711, C8105, C8110, C8130 and C-1087). However, pre-controlled emissions are estimated to be below the major source applicability thresholds so they are exempt from CAM at this time. It was noted that boilers, B25, B26 and B27 are listed as control devices since they are used to destruct volatile HAP from a number of process gas vents in accordance with MACT subparts PPP and FFFF. Therefore, since these control devices are subject to a 112 standard they are also exempt from CAM requirements.

A summary of the applicable CAM components pertaining to the groundwater/soil remediation unit are as follows:

Elements of the CAM Plan	Indicator No. 1 of 2	Indicator No. 2 of 2
I. GENERAL CRITERIA	Scrubber pH and flow	Oxidizer Temperature
Monitoring Approach	pH is measured and recorded at least once a day. Additionally, the scrubber liquor flow is monitored at least once a day.	Maintain operating temperature such that VOCs are destroyed
Indicator Range	The pH shall be maintained at 7 or above. The liquor flow shall be maintained to at least 30 gpm.	Maintain average combustion zone operating temperature at least 1,400 degrees F.
QIP threshold		
II. PERFORMANCE CRITERIA		
Specifications for obtaining representative data	Accuracy of pH (+/- 0.6) Typical accuracy of flow meter (+/- 4%)	Thermocouple or equivalent temperature monitoring device having a minimum accuracy of plus or minus 2%.
Verification of Operational Status	Not applicable	Failure of temperature monitoring device results in unit shutdown.
QA/QC Practices and Criteria	Monitoring device will be calibrated in accordance with manufacturer's specifications	In accordance with the manufacturer's specifications, qualified personnel shall conduct inspections of the thermocouples to ensure the monitors are operating properly.
Monitoring frequency	At least once every 15 minutes when HCL is present	At least once every 15 minutes when VOCs are present
Data Collection Procedure	Data will be recorded electronically	Data will be recorded electronically
Averaging Period	Daily	Daily

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

45CSR5	Coal Handling Facilities Exemption due to 45CSR2 applicability

45CSR7	Sulfuric and Phosphoric Acid mist/vapor Tanks used to store sulfuric acid or phosphoric acid from concentration limits. Per Section 10.6 of 45CSR7, sources with potential to emit less than 0.1 lbs/hr, 100 lbs/yr are exempt from the concentration limits of Section 4.2. The following tanks have been found to meet this criteria: Tank 9750 is used to store sulphuric acid at the Oxide Adducts Plant. Tank 8372 is used to store sulfuric acid at the Specialty Surfactants Plant. Tank 8433 is used to store phosphoric acid at the Specialty Surfactants Plant. Tank T01 is used to store sulfuric acid at the Water Treatment Plant.
45CSR7	The carpentry shops (B463) and welding shops (B307) are used for fabrication of materials to support site operations. These activities are incidental (support) operations to the South Charleston Facility and are not manufacturing processes. Carpentry and welding shop activities are not covered by 45CSR7.
45CSR10A 45CSR10	Testing, Monitoring, Record Keeping, and Reporting Requirements under 45CSR10 are not applicable to Boilers 25, 26 or 27, since they only combust natural gas in accordance with 45CSR§10-10.3 Boiler 25, 26 and 27 are also exempt from the 2000 ppm SO2 requirements of 45CSR§10-4 due to 45CSR§10-4.1.e and having a potential of less than 500 lbs/yr SO2 from any manufacturing processes venting to these boilers. Additionally 45CSR§10-5 for combustion of refinery or process gases containing hydrogen sulfide in excess of 50 grains/100 ft^3 due to process gas streams having no known potential for sulfur contamination.
40CFR60, Subpart Kb	The following tank associated with the Oxide Adducts Plant are greater than or equal to 19,813 gallons but less than 39,890 gallons and were constructed or modified after July 23, 1984 and have a maximum true vapor pressure less than 2.2 psia: 9513. The following tanks associated with the Oxide Adducts Plant are greater than or equal to 39,890 gallons and were constructed or modified after July 23, 1984 and have a maximum true vapor pressure less than 0.51 psia: 9510, 9511, and 9512. All tanks over 19,813 gallon capacity located at the Specialty Surfactants Plant store materials with < 2.2 psi vapor pressure at storage conditions.
40CFR60, Subpart Y	NSPS for coal handling facilities. The coal handling facilities have not been modified or reconstructed after the affected date of Subpart Y.
40CFR63, Subpart Y	NESHAP for Marine Vessel Loading Operations. The North Charleston Distribution Terminal is exempt from Subpart Y requirements because they no longer load barges at this location or any other location covered by this permit.
40CFR63, Subpart JJ	Wood Furniture Surface Coating. The South Charleston Facility is an incidental manufacturer and exempt from Subpart JJ. Less than 100 gallons per month surface coating and adhesive is used for wood furniture.

40CFR63, Subpart EEE	The permittee discontinued burning of hazardous waste in Boiler 25 prior to the compliance date of Subpart EEE for industrial boilers. Therefore Subpart EEE does not apply.
40CFR63, Subpart EEEE	The North Charleston Distribution Terminal (NCDT) and the Chemical Mixing Unit are exempt from the OLD MACT for one or more of the following reasons: Storage vessels located at NCDT are part of processing units covered by other MACTs, or Streams (materials transferred) have annual average true vapor pressure of Subpart EEEE Table 1 OHAPs at 77°F less than 0.1 psia, or Streams contain less than 5% by weight of Subpart EEEE Table 1 OHAPS and are not organic liquids subject to the OLD MACT. The EO distribution header system is exempt from the OLD MACT because in process piping is covered by another MACT (e.g. Polyether Polyol MACT, 40CFR63, Subpart PPP). The Specialty Surfactants Plant is not subject to the OLD MACT. The specialty Surfactants Plant is covered by the Polyether Polyol and Miscellaneous Organic Chemical Manufacturing MACT. Annual average vapor pressure of Table 1 OHAP at 77°F used as heat transfer liquid is less than 0.1 psia, or no streams containing greater than or equal to 5% by weight Table 1 OHAPS. The Gum Base Plant (previously known as Polyvinyl Acetate) is covered by the MON MACT. Annual average vapor pressure of Table 1 OHAP at 77°F used as heat transfer liquid is less than 0.1 psia.
40CFR63, Subpart MMMM	Coating of Metal Parts. The South Charleston Facility is an incidental manufacturer and exempt from Subpart MMMM due to 40CFR§63.3881(b). This provision establishes a lower cut-off at less than 250 gallons per month of paints/solvents is used.
40CFR63, Subpart FFFF	The Triton™ unit has one reactor, which is subject to 40 CFR 63, Subpart PPP for polyethylene polyols production. As a result, reactor 8400 (Alkox Reactor) is exempt from the requirements of Subpart FFFF in accordance with §63.2435(b)(3).

Changes to Renewal Permit

Section 1.1 Equipment Table

Due to the shutdown of the AA and VME units as well as the planned decommissioning of the coal boiler #25 a large number of emission units were removed from the equipment table. Additional changes consisted of typo corrections and the addition of three fire water pumps. The specific changes are listed as follows:

A grouping of 10 tanks originally labeled as "Middle Upper Island Tanks" were removed having emission unit IDs as follows: 6716, 6720, 6732, 6735, 6745, 6751, 6763, 6764, 6767, and 6770.

From the "Maintenance/Paint Shop & North Charleston Distribution Terminal (NCDT)" section the following emission units were removed from service: 9001, 9002, 9003, 9005, 9006, 9007, 9008, 9014, 9019, 9020, 9021, 9022, 9023, 9024, 9025, 9026, 9030, 9031, 9033, 9034, 9040, 9041, 9060, 9206, 9207, 9209, 9210, 9211, 9213, and 9999.

The Section previously labeled "Water Treatment and Laboratory" was changed to "Environmental Operations." Additionally, the equipment entries of T5715 and the Plant Lab were removed from this section. The T5715 tank was taken out of service, but the lab was removed due to being exempt from any

applicable specific requirements. Also three new pieces of equipment were added to this section of the permit due to becoming subject to new applicable requirements. Emergency fire water pumps, DP01E, DP02E, and DP03E were added due to new emergency RICE work practice requirements under 40C.F.R.63, subpart ZZZZ.

Within the equipment section of the Specialty Surfactants Triton™ unit, emission points were corrected for 8322, 8323, and 8324. Their previous entries were reflected incorrectly as 8722, 8723, and 8724. The Triad Hotwell equipment ID was updated to 8415 rather than D8415. Likewise D8515 was changed to 8515. The emission point for 8520 was updated to E-1085-4. Likewise the emission point for 8621was changed to E-1081-3, the emission point for 8835 was changed to E-1085-4 (shared with 8520) and the emission point for 8725 was corrected to T-8725. The description for 8701 was changed from tank to bin. Condenser E8105's ID was updated to C8105. The tank T-8629 entry was removed and more accurately reflected by changing its associated fugitive entry description from "Hopper for tank 8629" to "Hopper 8629 for 8600 Reactor" since the tank itself has no regulated emissions other than the fugitives associated with the solids loading hopper. The following equipment was removed from service: 8517, 8629, and 8825 within the Specialty Surfactants Triton™ unit. Additionally, a wastewater stream with applicable MACT requirements from the MON was added to the table as ID TR020/GR-7M Decant.

In the chemical mixing section of the equipment table the following emission units were removed: 4690, 4691, L800TT, and L050RC.

Within the oxide adducts, OA section of the table, three surplus tanks from AA were added as IDs 5694, 9636, and 200. These tanks were previously listed in the West Mainland Section of the table. Additionally, the L003 drum loading emission unit was removed from service.

The energy systems section of the table was updated to reflect an emission unit ID change to B25, B26, and B27, which were previously referred to as "Boiler #s". Additionally, an entry for the ethylene oxide distribution header system was added to energy systems due to fugitive requirements placed on the header system. Also within this section the coal and ash handling equipment was removed from service since the B25 boiler will no longer be burning coal and is in the process of being decommissioned

The Gum Base unit equipment table was updated to remove T-3011, T-3025, T-3032, T-3054, T-3055, C-0101, C-0102, C-0103, C-0209, D-2, and B25 or B27 IPH. The B25 and B27 entries were originally include here as a result of the boilers being used as waste gas vent control, but was determined to be unnecessary since these emission units were already accounted for within energy systems.

Section 1.2 Applicable Permits and Consent Orders

This section was added to reflect the new organizational framework for Title V permits in WV. This new section list all minor and major source NSR permits. As a result of adding this section the NSR permit citations contained throughout this permit shall only refer to the base permit number and will leave off the modification "letter" extension for convenience. Therefore, all citations within this renewal permit were updated to reflect this change by removing their letter extensions.

Section 2.0 General Conditions

The general boilerplate was updated to include the following changes:
Condition 2.1.4 was incorporated to clarify the meaning of rolling yearly total
Condition 2.19.1 was revised to change the 40CFRPart2 reference to 40 C.F.R. Part 2.
Condition 2.21.2.a was revised to remove "The" and replace with "an".

Section 3.0 Facility Wide Requirements

Within section 3.0 the general boilerplate was updated to include changes to the following permit conditions: 3.1.1, 3.1.2, 3.1.3, 3.1.7, 3.1.8, 3.3.1, 3.5.3, and 3.5.5. Additionally, the citation to 3.4.1 was updated to reflect the overlap with 45CSR13 permit requirements for R13-2033, R13-2840, and R13-2414. Also within condition 3.7.2, the non-applicability language which corresponds to 45CSR10 was updated to reflect the removal of furnace #5 and to correct a typo and change "Boilers 25 and 27" to "Boilers 26 and 27". Within this same condition under 40CFR63, Subpart EEEE, the language was removed pertaining to

the AA and VME units that have been permanently shutdown. Also within condition 3.7.2 the non-applicability language pertaining to 40CFR63, Subpart ZZZZ was removed since the regulation has now been amended to include RICE units less than 500 hp.

Lastly, original permit conditions 3.1.9 and 3.1.10 were deleted since they pertained to CAIR programs that have expired. A new condition, 3.1.9, was added to require the boiler emission units to continue reporting NO_X mass emissions under 40 CFR Part 75. Also, the appendix containing the initial CAIR Permit Application was removed from the permit.

Section 4.0 Source-Specific Requirements [Energy Systems - Boiler Power House and Auxiliary Air Compressors, Emission Point ID(s) (25E, 26E, 27E, A-001, A-002, A-003, A-004)]

Within section 4.0 all boiler B25 requirements, with the exception of 4.1.4, were removed and transferred to section 6.0 which was previously reserved. This restructuring hinges on the planned decommissioning of the boiler and the segregation of requirements, which will soon be obsolete. Condition 4.1.4, which comes from the newly modified 45CSR13 permit number R13-2033C, specifies the conditions associated with permanently shutting down the B25 boiler.

Due to a complete restructuring (new numbering system) and modification of 45CSR13 permit number R13-2033C issued on 9-20-2011, section 4 of the permit was revised to incorporate all newly modified permit conditions pertaining to boiler B26. Additionally, all changes affecting the emergency air compressors incorporated under R13-2414C, which was issued on 8-8-2011, were incorporated within this section of the permit. Permit condition 4.1.15 deviated from the original R13-2414C condition A.3 by taking out the specific reference to the Diethyl Ketones and Pentanedione units since they are no longer in operations. Also permit condition A.4. of R13-2414C was omitted and not included within the Title V permit since it was more of a statement than a requirement. The omitted condition is listed as follows:

A.4. The process vent gases drafted to Boiler No. 27 from those plants identified in Specific Requirements A.3. of this permit are deemed to have negligible heating values.

Section 5.0 Source-Specific Requirements [Specialty Surfactants (Triton™), Unit ID(s) (listed under Specialty Surfactants within Section 1.0)]

The permit conditions within this section remained unchanged with the exception of removing equipment references in 5.1.1 and 5.1.13 to emission unit 8517 which was removed from service.

Section 6.0 Source-Specific Requirements [Energy Systems – Equipment to be Decommissioned, Emission Point ID(s) (25E)]

Section 6.0, which was previously listed as reserved, is utilized within the proposed renewal to consolidate all Boiler 25 requirements that were originally found within section 4.0. These requirements were consolidated in anticipation of the decommissioning of this unit in 2012. Therefore, the permit may be easily revised upon the next permitting action to remove all requirements associated with the B25 boiler. The rearranging of requirements in this fashion also clarifies the requirements for the remaining two boilers, B26 and B27 within section 4.0. However, it was determined necessary to duplicate condition 4.1.4 with condition 6.1.13 due to the fact that it applied to both boilers B25 and B26 and allows the work permitted on B26 to be used to establish the shutdown schedule for B25. Under this review it was noted that a MEK listing within the emission limit table of 6.1.11 was missing when compared to the corresponding minor NSR permit R13-2568 condition A.9. This change was traced back to earlier permitting actions, which recognized the shutdown of the DEK production unit where the MEK emissions originated as a process vent gas controlled by the boiler.

Two new requirements can be found under 6.1.17, which was a voluntary requirement established at the company's request to limit fuel usage options to only gaseous feeds consisting of natural gas and process vent gases which require control under the MACT program. Additionally, condition 6.1.18 was added to bring in a minor source NSR requirement under R13-2568, condition B.4, which had been omitted from previous Title V permits. Along with these changes, clarifying language was added to conditions 6.1.9 and 6.2.1 to recognize the voluntary fuel limitation of 6.1.17, which under 45CSR2 alleviates the use of an ESP to control PM and the use of COM to satisfy the opacity requirement, respectively.

Sections 7.0 Source-Specific Requirements [40CFR63, Subpart PPP "Polyether Polyols" MACT requirements for Oxide Adducts production units, Emission Point ID(s) (See Section 1.0 for Oxide Adducts Equipment List)]
There were no changes to section 7 at this time.

Section 8.0 Source-Specific Requirements [Toxic Air Pollutant Sources, Incorporation of 45CSR27 Standards and Consent Order # CO-R27-97-17-A(94-21), Emission Point ID(s)(Listed Below 8.1.5 Tables)]
The 45CSR27 benzene limitations of Table 8.1.5.a. were removed from permit condition 8.1.5 due to the removal from service of the subject tank, ID 9003. Additionally, the associated monitoring requirements for this tank under 8.2.6 were also removed.

Section 9.0 Source-Specific Requirements [Volatile Organic Compound Sources and Incorporation of 45CSR21 Standards and Consent Order # CO-R21-98-22, ID(s)(Listed in Attachment C)]
There were no changes to section 9 at this time.

Section 10.0 Source-Specific Requirements [Gum Base Plant (Polyvinyl Acetate, PVA) - (See Section 1.0 for Gum Base Plant Equipment List)]
The permit conditions of 10.1.6, 10.1.7, 10.1.11, 10.2.1, and 10.4.4 were revised to include boiler B26 as an option for MON control of Group 1 vents within the Gum Base unit. Minor NSR permit R13-2033C issued on 9-20-2011 authorized waste gas control using the B26 boiler.

Section 11.0 Source-Specific Requirements for [Groundwater/Soil Remediation Process, Emission Point ID (SVE1)]
This previously reserved section was used to incorporate 45CSR13 permit number R13-2840 requirements pertaining to the Groundwater/Soil Remediation Unit. This section incorporates the criteria and HAP emission limits defined within the minor source NSR permit as well as establishes testing and operating parameter limits for the thermal oxidizer and packed bed scrubber control devices.

Section 12.0 Source-Specific Requirements [Chemical Mixing (See Section 1.0 for Equipment List)]
There were no changes proposed within section 12 at this time.

Section 13.0 Source-Specific Requirements [Emergency Engines under 40 C.F.R. 63, Subpart ZZZZ (RICE); Compressors and Fire Water Pumps, Emission Points: (DP01E, DP02E, DP03E, A-001, A-002, A-003, and A-004)]
This section incorporates new 40 C.F.R. 63, Subpart ZZZZ (RICE) requirements for three existing stationary compression ignition firewater pumps. Two engines (DP01 and DP02) are less than 500 hp with the exception of one engine (DP03E) is rated at 560 hp. Engines 500 hp or less have to conduct work practice maintenance requirements in order to assure operations are maintained within manufacturer's specifications. The larger firewater pump greater than 500 hp was found to be exempt from the work practice standards. However, all engines have to adhere to the conditions under 40 C.F.R.§63.6640(f) which defines the use of the engines as emergency units.

Section 14.0 Source-Specific 40 C.F.R. 64 (CAM) Requirements for [Groundwater/Soil Remediation Process, Emission Point ID (SVE1)]
This section incorporates new 40 C.F.R. 64 CAM requirements for the Groundwater/Soil Remediation Process, Emission Point ID (SVE1). These requirements assure compliance with the VOC and HCl/Cl limits permitted for the remediation activities. The groundwater/soil remediation unit utilizes a thermal oxidizer operated in series with a packed bed caustic scrubber. Testing is required to demonstrate that 45CSR13 pollutant emission limits are being met. Additionally, if compliance with the emission limits is confirmed, the test conditions shall establish operating limitations for its associated control equipment. Within 180 days of permit issuance the operating parameter limits shall be established and any exceedances or excursions reported from this time on.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: May 11, 2012
Ending Date: June 10, 2012

All written comments should be addressed to the following individual and office:

Jesse Hanshaw, P.E.
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street S.E.
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Jesse Hanshaw, P.E.
West Virginia Department of Environmental Protection
Division of Air Quality
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Response to Comments

Comments were received from the Company (UCC) on June 11, 2012. The comments along with DAQ response are documented below.

PROPOSED CONDITION: 3.1.8.
COMMENT: The South Charleston Facility is covered by risk management plan provisions, 40 CFR Part 68. See following suggested revision.
SUGGESTED PERMIT LANUAGE: 3.1.8. Risk Management Plan. ~~Should this~~ **This** stationary source, as defined in 40 C.F.R. § 68.3, **is** ~~become~~ subject to Part 68~~., then the~~ **The** owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71. [40 C.F.R. 68]
DAQ RESPONSE: These changes are warranted and were incorporated in the final permit

PROPOSED CONDITION: 3.1.10

COMMENT: Per email dated May 29, 2012, from Mr. Jesse Hanshaw, proposed condition 3.1.10. and Attachment B – "CAIR Permit Application" will be added to the permit when issued. These proposed conditions relate to the CAIR NO_x Ozone Season Trading Program and are listed in current permit R30-03900003-2006. UCC agrees that inclusion of these provisions is appropriate.

SUGGESTED PERMIT LANUAGE: not applicable

DAQ RESPONSE: The DAQ agrees these changes are warranted

PROPOSED CONDITION: 4.2.10.

COMMENT: This proposed condition provides that Boiler 26 and Boiler 27 visible emission checks be performed. The provision, based on Boiler 26 Regulation 13 Permit No, R13-2033C, Condition 4.2.5., provides that opacity checks need to be performed when natural gas condensate is being burned. Since Boiler 27 will not burn natural gas condensate, the references to Boiler 27 should be deleted.

Boilers 26 and Boiler 27 are natural gas fired boilers. The boilers are used to control process vent gases from UCC's Gum Base Plant and Bayer MaterialScience's Propylene Oxide Regeneration System. During cold ambient air conditions, liquid condensate is collected from pipeline natural gas fuel feed piping. The condensate will be vaporized and burned in Boiler 26. Pipeline natural gas, process vent gases, and natural gas liquid condensate do not contain ash forming substances, Compliance with the Regulation 2 visible limit of 10% opacity, based on a six minute block average, is inherent to the types of fuels and process vents gases authorized to be burned. UCC believes that performing visible emission checks for Boilers 26 and 27 are not needed to demonstrate compliance.

SUGGESTED PERMIT LANUAGE:

4.2.10. The permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for the emission point corresponding to Boiler~~s~~ B26. ~~and B27.~~

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month when natural gas condensate is burned. These checks shall be performed on the Boiler 26 stack exhaust for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. Method 9 checks shall be performed on the source for at least six (6) minutes. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions. [45CSR§30-5.1.c., 45CSR13, Permit Number R13-2033, Condition 4.2.11., Emission Point ID (26E~~,~~ ~~27E~~)]

DAQ RESPONSE:

Due to the burning of various waste gas streams the original intent was to also include the B27 boiler in these VE checks. However, since the wording taken from the B26, R13-2033 requirements were specific only to natural gas condensate it was determined that a revision is necessary to clarify the writer's original

intent. The revised language would be as follows:

4.2.10. The permittee shall conduct visible emission (VE) checks and/or opacity monitoring and recordkeeping for the emission points corresponding to Boilers B26 and B27.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

For Boiler B26 v~~V~~isible emission checks shall be conducted at least once per calendar month when natural gas condensate is burned. **Additionally, visible emission checks shall be conducted on Boilers B26 and B27 at least once annually** ~~**to evaluate operating scenarios where waste**~~ **when process vent gas streams (UCC's Gum Base Plant and/or Bayer MaterialScience's Propylene Oxide Regeneration System) are controlled by the boilers.** ~~**The**~~ **When Bayer MaterialScience propylene oxide vent gas is burned, the permittee shall conduct the VE check** ~~**checks**~~ **during the de-acitivation step of the process which represents the condition of highest propylene oxide loading. VE checks when burning Gum Base Plant process vent gas may be performed at any time during operation of the continuous process.** ~~**under the highest pollutant loading scenario. and**~~ **The permittee shall document the specific** ~~**waste**~~ **process vent gas stream(s) venting to the boiler during the check(s). If process vent gas control does not occur simultaneously for the two process vents listed above, then VE checks should be alternated over time to coincide with the various venting arrangements.** These checks shall be performed ~~on the Boiler 26 stack exhaust~~ for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of **operation as specified above** ~~normal facility operation~~ and appropriate weather conditions.

If visible emissions are present for three (3) consecutive monthly checks, **or any one of the annual checks** the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of Method 9 as soon as practicable, but within seventy-two (72) hours of the final visual emission check. Method 9 checks shall be performed on the source for at least six (6) minutes. A Method 9 observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.
[45CSR§30-5.1.c., 45CSR13, Permit Number R13-2033, Condition 4.2.11., Emission Point ID (26E, 27E)]

Noted by UCC: The Bayer vent gas is a batch process where vent gas flow rate and composition varies over time. A revision to the draft language is suggested to identify the batch step with highest propylene oxide loading during which the VE check needs to be conducted. The GBP is continuous process so the

VE check can be performed at any time (except startup/shutdown when vinyl acetate concentrations could be reduced.

PROPOSED CONDITION: 11.3.4.3

COMMENT: The reference in section 11.3.4. to condition "4.2.1" (that concerns monitoring requirements for Boilers 26 and 27) needs to be changed to condition "11.2.1". Proposed Condition 11.3.4 regards records relating to the regenerative thermal oxidizer while condition 11.2.1 concerns the Vapor Extractive System. UCC understands that the intent of condition 11.3.4.3 to be that records of volatile organic compound vapor extractive system vent stack test results need to be maintained. Please advise UCC if our understanding is not correct.

SUGGESTED PERMIT LANUAGE:

11.3.4.3. The permittee shall maintain the following records relating to the RTO.

11.3.4.1 …….

11.3.4.3 Copy of the testing results required by condition **11.2.1.** ~~4.2.1~~ of this permit.

11.3.4.4 ……

DAQ RESPONSE: These changes are warranted and have been addressed in the final permit

PROPOSED CONDITION: 13.1.7 (two proposed conditions with same identification)

COMMENT #1: There are two conditions identified as "13.1.7." The second condition should be renumbered as "13.1.8."

*COMMENT #2: Renumber proposed condition 13.1.8. Emergency firewater pump DP03 was installed prior to December 19, 2002 (existing RICE) and is greater than 500 horsepower. The provisions of §63.6640(f) do not apply. Per §63.6640(f), a new or reconstructed emergency stationary RICE greater than 500 hp located at a major source of HAP emissions installed **on or after** June 12, 2006 needs to comply with the requirements in paragraphs (f)(1) though (f)(4). UCC requests revision of this proposed condition to be consistent with the Federal rule.*

SUGGESTED PERMIT LANUAGE:

13.1.8. If you own or operate ~~an~~ **a new or reconstructed** emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed **or reconstructed** ~~prior to~~ **on or after** June 12, 2006, you must operate the engine according to the conditions described in paragraphs ~~(f)~~(2)(i) through (iii) of this section. If you do not operate the engine according to the requirements in paragraphs ~~(f)~~(2)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines. [40 C.F.R. §63.6640(f)(2); 45CSR34~~, Emission Points (DP03E)~~] ~~*This condition is subject to the compliance date specified in condition 13.1.1*~~

DAQ RESPONSE to COMMENT #1: These changes are warranted

DAQ RESPONSE to COMMENT #2: The requirement stated in the renumbered 13.1.8 condition is consistent with Federal Rule 40 C.F.R. §63.6640(f)(2) and has been addressed within EPA's applicability table STEP 2(a)(ii) as well as EPA training from Melanie King of EPA presented on December 7, 2011.

Within this training, slide 18 identifies emergency engine requirements. On this slide a bulleted point elaborates on the applicability to these existing emergency units by stating the following, "If engine is > 500 hp, located at a major source, and installed prior to June 12, 2006, there is no limit on maintenance/testing hours." This slide also goes on to note that these emergency engines cannot be used for peak shaving and additionally don't have the allowance for 15 hours of demand response operation.

Therefore, the DAQ believes these requirements apply to the existing unit (DP03) and should remain unchanged within the permit in order to clearly define the criteria, which classifies the RICE as an emergency unit. However, the DAQ also recognizes the confusion since EPA chose not to regulate other non-emergency 2SLB and 4SLB engines within this same existing engine category. Although, since the engine is a compression ignition (CI) diesel unit, if the emergency engine in question is not operated in accordance with the criteria established within 40 C.F.R. §63.6640(f)(2), then emission standards would become applicable.

PROPOSED CONDITION: 14.2.5.b.

COMMENT #1: Paragraph "b" seems to require development of a quality improvement plan if the compliance continuous monitoring system(s) downtime exceed 5%. For clarification, UCC requests that preparation of a quality improvement plan (QIP) may be required if the continuous parametric compliance monitoring system downtime for an individual monitored parameter exceeds 5% of the total time during a calendar quarter when the thermal oxidizer/scrubber system is operating.

COMMENT #2: Paragraph "c" provides that a QIP is required if the number of excursions is three or more during a calendar quarter. UCC requests this provision be modified to clarify that implementation of a QIP is needed if the number of excursions for either the thermal oxidizer combustion temperature or packed bed scrubber liquid flow rate, respectively, exceed three per calendar quarter. UCC also requests that the Agency include a waiver of the QIP implementation requirement similar to that found in paragraph "b".

14.2.5. SUGGESTED PERMIT LANUAGE:
Quality Improvement Plan (QIP)

a. Based on the results of a determination made under permit condition 14.2.3.b, 14.2.5.b, or 14.2.5.c the Administrator or the Director may require the permittee to develop and implement a QIP. If a QIP is required, it shall be developed, implemented, and modified as required according to 40 C.F.R. §§64.8(b) through (e). Refer to permit condition 14.5.1(b)(iii) for the reporting required when a QIP is implemented.

b. If five (5) percent or greater of the **unit operating** time~~,~~ is documented as monitoring downtime **of either the thermal oxidizer combustion temperature monitor or scrubber liquid flow rate measuring device, as identified in Condition 14.2.1.a and b, respectively,** during a calendar quarter, the permittee shall develop and implement a QIP. The Director may waive this QIP requirement upon a demonstration that the cause(s) of reduced data availability have been corrected.

c. If the permittee observes an excursion of the daily average operating limits **for either the thermal oxidizer combustion temperature or packed bed scrubber, respectively,** ~~defined for each control device~~ for three or more days during a calendar quarter, the permittee shall develop and implement a QIP. **The Director may waive this QIP requirement upon a demonstration that the cause(s) of excursions have been corrected**.
[40 C.F.R. §§ 64.8 and 64.7(d); 45CSR§30-5.1.c.]

DAQ RESPONSE: These changes are warranted and have been addressed in the final permit

PROPOSED CONDITION: 14.2.1.b

Comment: 14.2.1.b. In the last sentence, the word "units" should be inserted after "0.6" (regarding accuracy of pH measurements) and the words "plus or minus" should be inserted before "0.4% (regarding flow meter accuracy).

SUGGESTED PERMIT LANGUAGE:
14.2.1. The permittee shall implement a CAM program for the thermal oxidizer (A42INC) and the packed bed scrubber (A42PBS) based on the following performance indicators:

a. ……

b. The packed bed scrubber shall be operated in a manner to ensure the daily pH monitoring value of the recirculated scrubber liquor is maintained to a level of at least 7.0. Additionally, the scrubber shall maintain a daily average liquor flow to the packed bed of at least 30 gpm. Liquid flow rate shall be monitored continuously, which shall mean at least once every 15 minutes. The accuracy of the pH measuring device shall not exceed plus or minus 0.6 **units** and the accuracy of the flow meter shall not exceed **plus or minus** 0.4%.

[40 C.F.R. 64, 45CSR§30-5.1.c]

DAQ RESPONSE: These changes are warranted and have been addressed in the final permit

PROPOSED CONDITION: 14.3.1

COMMENT 1: The proposed condition requires that VOC stack testing results be submitted within 150 days of permit (Regulation 30) issuance. Proposed condition 11.2.1 requires stack testing for VOCs every six calendar months. Because the remediation technology being employed is new to the South Charleston Facility, there are extended periods during which the process is not operated. UCC requests that condition 14.3.1 be revised to provide that testing for VOCs and hydrochloric acid (proposed condition 14.3.2) will be performed concurrently. Otherwise, two tests may be needed within a relatively short period of time to meet the specifications of proposed condition 11.2.1 (testing at six month frequency) vs. proposed condition 14.3.1 (test with 150 days of permit issuance.)

SUGGESTED PERMIT LANUAGE:

14.3.1. In order to verify compliance with the VOC limitations of this permit as well as establish and verify adequate oxidizer temperatures are being maintained, the operator shall conduct VOC stack testing in accordance with 45CSR13 permit number R13-2840 and thus Title V permit condition 11.2.1. ~~Although this~~ **This CAM** testing requirement ~~may~~ **shall be conducted at the same time as** ~~correlate with the initial or subsequent testing~~ defined by the overlapping minor source ~~NSR permit~~ **permit R30-2840.** ~~, in no case shall the~~ **The** test results **shall** be reported to DAQ **in accordance with Condition 3.3.1.d. unless otherwise approved by the Director.**~~later than 150 days from permit issuance~~

[40 C.F.R. 64, 45CSR§30-5.1.c.]

DAQ RESPONSE: It is the intent of the original draft permit to allow the CAM testing to coincide with that of the Rule 13 permit. Additionally the HCL and VOC testing requirements may certainly be conducted concurrently and were expected to be since they have the same CAM time constraints. In accordance with Part 64, the CAM regulation, the 150 day time frame is specific to the prescribed 180 day allowance within 40 C.F.R.§64.4(e) to fully implement the CAM monitoring provisions. The DAQ typically requires at least 30 days to review the test results in an effort to confirm their accuracy and representativeness, however since time is a critical factor in this case the DAQ is willing to change the 150 day submittal date to coincide with the exact 180 day language within part 64.

REVISED PERMIT LANGUAGE:

14.3.1. In order to verify compliance with the VOC limitations of this permit as well as establish and verify adequate oxidizer temperatures are being maintained, the operator shall conduct VOC stack testing**, which may coincide with that prescribed** in accordance with 45CSR13 permit number R13-2840 and thus Title V permit condition 11.2.1. Although this **one-time** CAM testing requirement may correlate with the initial or subsequent testing defined by the overlapping minor source NSR permit, in no case shall the **schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval of the permit. The** test results **shall** be reported to DAQ **in accordance with Condition 3.3.1.d. unless otherwise approved by the Director.**

[40 C.F.R.§64.4(e), 45CSR§30-5.1.c.]

PROPOSED CONDITION: 14.3.2
COMMENT: The proposed condition will require a stack test to measure emissions of hydrochloric acid (HCl) within 150 days of permit issuance. To provide flexibility for meeting the required test completion and test results submittal date, UCC requests that the condition be revised to provide that an extension of the submittal date may be approved by the Director. *Per discussion with the permit writer, UCC understands that the intent of this provision is that a one-time HCl emissions test is required. For clarity, UCC requests that the proposed condition be revised accordingly.*
14.3.2. SUGGESTED PERMIT LANUAGE: In order to verify compliance with the HCl limitations of this permit as well as establish and verify adequate scrubber flow and pH are being maintained the operator shall conduct **a one-time** hydrogen **chloride stack emissions test** ~~halide testing~~ in accordance with 40 C.F.R. 60, Appendix A, Method 26A. The **one-time HCl test** ~~said testing~~ shall be conducted **at the same time that a VOC test is performed as** ~~to correlate with VOC test~~ing required by 11.2.1. **The test results shall be reported to DAQ in accordance with Condition 3.3.1.d unless otherwise approved by the Director.**~~This testing should be completed and submitted for review to the DAQ within 150 days of permit issuance.~~ [40 C.F.R. 64, 45CSR§30-5.1.c.]
DAQ RESPONSE: It is the intent of the draft permit to allow the CAM testing to be conducted at the same time as that prescribed within the Rule 13 permit requirements. Additionally, this is an initial testing requirement only and subsequent HCl testing would only be required if warranted by control device changes or changes to the emission unit itself or its method of operation. However, in accordance with Part 64, the CAM regulation, the 150 day time frame is specific to the prescribed 180 day allowance within 40 C.F.R.§64.4(e) to fully implement the CAM monitoring provisions. The DAQ typically requires at least 30 days to review the test results in an effort to confirm their accuracy and representativeness, however since time is a critical factor in this case the DAQ is willing to change the 150 day submittal date to coincide with the exact 180 day language within part 64.
REVISED PERMIT LANGUAGE: 14.3.2. In order to verify compliance with the HCl limitations of this permit as well as establish and verify adequate scrubber flow and pH are being maintained the operator shall conduct **an initial** hydrogen halide test~~ing~~ in accordance with 40 C.F.R. 60, Appendix A, Method 26A. The ~~said~~ testing ~~shall~~ **may** be conducted to correlate with VOC testing required by 11.2.1. **Although this CAM testing requirement may correlate with the initial or subsequent testing defined by the overlapping minor source NSR permit, in no case shall the schedule for completing installation and beginning operation of the monitoring exceed 180 days after approval of the permit. The test results shall be reported to DAQ in accordance with Condition 3.3.1.d. unless otherwise approved by the Director.** ~~This testing should be completed and submitted for review to the DAQ within 150 days of permit issuance.~~ **[40 C.F.R. 64, 45CSR§30-5.1.c.]**

PROPOSED CONDITION: 14.5.1.b.iii

COMMENT: For clarification a minor change is requested. A report should not be needed if implementation of a quality improvement plan has not been necessary.

SUGGESTED PERMIT LANUAGE:

14.5.1. General Reporting Requirements for 40 C.F.R. Part 64 (CAM)

a. ……..

b. A report for monitoring under 40 C.F.R. 64 shall include, at a minimum, the information required under permit condition 3.5.7. and the following information, as applicable:

i. ……..

ii. ……; and

iii. A description of the actions taken to implement QIP **if applicable** during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 C.F.R. §64.9(a); 45CSR§30-5.1.c.]

DAQ RESPONSE: This change is warranted has been addressed in the final permit